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GERARDIA TENUIFOLIA, ~~Vahl,~~ var. ASPERULA.—Leaves all nearly filiform, the upper side hispidulo scabrous or asperulous (in the manner of *G. aspera*): inflorescence more paniculate and with the pedicels all ascending: corolla small, the expanded limb only half an inch in diameter.

Dry and bare hills and bluffs, Missouri to Minnesota, Wisconsin, and Michigan. This well marked variety I received many years ago from the late *T. J. Hale*, who collected it at St. Croix, Wisconsin, and in Fillmore Co., Minnesota; and I have also a fragment from Michigan. Mr. H. Eggert of St. Louis—a good collector and keen observer—now sends it from Eastern Missouri, and notes how different it is from the *G. tenuifolia* of the neighborhood (but which grows in open woods), the latter being my var. *macrophylla* or approaching it. The present plant diverges quite as much from the typical *G. tenuifolia* in another direction, and should certainly have a distinctive name.—ASA GRAY.

SOME RARE PLANTS.—In Mr. Curtiss' last article on the Flora of the Shell Islands of Northern Florida, he mentions the fact of his finding a species of *Peperomia*. Judging from the meagre description given it is probably the same plant as one found by Miss Reynolds in the Indian river region of that State, and which can be confidently stated to be identical with specimens in the Herbarium of the Academy of Natural Sciences of Philadelphia, collected by Nuttall's correspondent Mr. Ware, and described by that author, as I am informed by Dr. Gray, in an early number of Silliman's Journal. Nuttall's ticket reads thus: "**Piper leptostachyon*, East Florida, Mr. Ware." The asterisk, as given above, is his well known indication of a new species. The plant is evidently a *Peperomia*, a genus separated from *Piper* (as I suppose) since the date of the above mentioned publication. It is singular that this plant, so long ago discovered, should not have been again detected until during the past year, and that the publication of the name, with well preserved specimens to back it, should have been neglected by subsequent authors. At least one other species, *P. magnoliæfolia*, has been found within a year or two by Dr. Garber in South Florida.

Miss Reynolds had the good fortune to make another acquisition in the same district in a species of *Callisia*, which, if not identical, is very near a Cuban Species, the *C. meiandra* of Charles Wright (his No. 3728). The genus is nearly allied to *Tradescantia*.

Two other notes of rare plants may be worth making. Dr. Mellichamp has found *Vincetoxicum scoparium*, Gray, (*Cynoctonium?* Chapman) at Bluffton, South Carolinia, and Mr. Shriver has sent specimens of *Adiantum Capillus-Veneris*, L., from the banks of New River, Wythe County, Virginia.—WM. M. CANBY.

ERRATUM.—In Mr. Canby's article on *Baptisia* in the April No. of the GAZETTE, page 131, line 14 from bottom, for "septa" read sutures.

THE YELLOW SNOW—POLLEN GRAINS OR ALGÆ?—A microscopic examination of a portion of the yellow matter, which appeared in the streets of Easton after the snow storm of Monday morning, March 17th, proves it to consist of pollen grains, united at first, but separated when dry, or when again wetted. They correspond in every respect with those of the long-leaved or yellow pines of the Southern States (*Pinus australis*, Michx.), with which they have been carefully compared. This pine, though very abundant in the lowlands of North Carolina, does not extend north into Virginia. The specimen in flower, which furnished the pollen for comparison, was gathered near Wilmington, N. C., in the month of March. Currents of air have, no doubt, brought from that distant region enough of the pollen to powder lightly a considerable district in Northeastern Pennsylvania. Thus far, it has been reported as seen in the Counties of Berks, Lehigh, Carbon and Northampton. I may state also that I have found the water in rain-hogsheads, in Central Pennsylvania, covered with pollen of pine trees, brought by the winds from the neighboring mountains at the season of their flowering, in the month of May.—THOMAS C. PORTER, *Easton, Pa.*

A VISIT TO THE SHELL-ISLANDS OF FLORIDA, by A. H. Curtiss.—Paper III.—Few who have visited Florida know even the location of the Sister Islands; many who reside within sight of them know not their names. Fishermen occasionally resort to them but they present little of interest to any one but a botanist, and to him a brief exploration is sufficiently satisfactory, especially as an ever sounding voice seems constantly calling him to the sea-shore. The ocean is in plain sight, yet not easily reached, for there intervenes a vast expanse of marsh and the channel through it is extremely tortuous and difficult to navigate. Once in August the writer made a journey of

sixty miles through a similar marsh, finding but five or six landing places on the whole route. The innumerable creeks winding through them form a watery labyrinth through which the tides struggle for a passage. The vegetation is uninteresting and as monotonous as the landscape. Green walls of rigid *Spartina* hem in the vision on every hand, for one can see but a little way in any direction on account of the windings of the channel which may lead toward every point of the compass within the space of ten minutes. When the tide is high there is no spot on which to set foot; as it falls the water comes streaming out from among the grass over the black shining banks, which harbor innumerable crustaceans, and emit a noisome odor. Where the banks are more elevated the wallow of an alligator may sometimes be seen and occasionally the grass gives place to broad mats of Sea-Purslane and Samphire (*Sesuvium Portulacastrum* and *Salicornia fruticosa*). No cheerful sounds greet the ear, the silence is only broken by the harsh cries of marsh fowls, and the ocean's mournful, never ceasing war. Standing up in the boat one looks out over a vast green plain and sees in the distance or near by, islands, light-houses and sails, but the nearest objects may be the most inaccessible, and a day's journey end almost where it began. Indeed, upon reaching Cedar Point, the first landing on the Sister Islands Channel, although we have traveled four or five miles, we are evidently farther from the ocean than when we started. But here we are able to take a new course leading directly to the inlet which separates Talbot from Fort George Island. These are the southernmost of the islands which give rise to the land-locked or inland passage to Florida. North of Talbot is Amelia Island, on which the city of Fernandina is situated. Between Talbot and the mouth of the St. Johns is Ft. George Island, a favorite resort of tourists, who here enjoy the privileges of a fine hotel situated near the sea-beach and among forests of tropical luxuriance. From the observatory one looks down upon the shaggy forest of gnarled oaks and plumy palms, to the west, over far stretching marshes, eastward, over the boundless ocean. On the south the "river of lakes" finishes its marvelous course and pours the waters of Florida into the ocean. At its mouth is the much dreaded "bar" marked by a line of foaming breakers. Across the river are the white sand hills and summer cottages of Mayport, a name associated with the young and promising botanist, Henry D. Keeler, who, alas! now sleeps beneath northern snows. His father, the collector of the port, resides a mile out on the road to St. Augustine. It is a sylvan home embosomed in grand forests of Palmetto,

which open eastward and allow a fine view of the ocean. Great natural beauties and art skillfully directed, have conspired to render this a home worthy its cultured occupants, who have bestowed upon it the Greek name Thalassa. The Palmetto is the glory of the "land of flowers," and here, at the very gates of the State one may see it in its perfect development, and study it in its various stages of growth. During the first year the Palmetto puts forth one or two lanceolate, plaited leaves and a multitude of tough, cord-like roots. Having securely established itself in the ground it begins to develop its characteristic fan-shaped leaves, the linear divisions of which diverge from a stout, recurved midrib. For many years the trunk is concealed by the imbricated bases of the huge leaf-stalks; these are provided with sheaths of tough, interwoven brown fibres, which encircle the stem and hold them in position long after the leaves disappear. These old leaf-stalks split at the base as the trunk enlarges, become bleached, and, bristling from the trunks like ivory tusks, present a most singular appearance. After many years the leaf-stalks fall off and leave exposed the brown, cylindrical, somewhat ringed trunks which are sometimes thicker at the top than at the bottom. The small, creamy-white flowers are borne in immense panicles and are succeeded by black berries which have the flavor of dates and are generally gathered by birds before they mature. To the extreme diversity of appearance of the Palmetto, these forests mainly owe their peculiar beauty. Each heightening the effect of the other, the scene borrows grace from the young sprays, grandeur from the towering brown shafts and picturesqueness from the white-pronged trunks of the younger trees, while variety and contrast are added by numerous species of Magnolia, Oak, Bay and other evergreen trees, whose leaning trunks and larger branches support ærial gardens of Ferns, Orchids, Tillandsias and innumerable vines. The transition from these forests to the shrubby thickets bordering the sea is as sudden and surprising as if one were to step from Cuba into Labrador. There, from a black vegetable mold and in a damp atmosphere, every thing grows in tropical luxuriance, here on the storm-swept sands, the Bay-berry, Ilex, and Dwarf Oaks interlock their rigid branches as if in mutual protection against the elements, forming impenetrable copses, reminding one of the growths found on mountains. Between the limits of aborescent growth and the sea is a desolate expanse of white sand, in places smooth as a floor, in others hollowed out into moats which are filled with water, and in others piled up in hillocks or dunes, which appear like earth-works thrown

up against the invading elements. It is a region where the storm king holds undisputed sway, over which fierce winds and tumultuous waves sweep with resistless fury. Following the shore close by the swelling surf, treading the line which bounds an ocean from a continent, the mind is filled with a sense of awe, of unreality, with a fascination which tempts one to wander "on and on forever," forgetful of the past, unmindful of the future, striving to catch the meaning of the ocean's strange murmur, to form a conception of its vastness and of the strange world of life concealed within it. In such musings we indulge for a few moments, then our attention is diverted to the novel and curious objects on the shore. Hundreds of white winged cranes are watching for what the sea may cast up, their moving forms scarcely distinguishable in the distance from white breakers; overhead sea-gulls wheel and scream, while over the beach spirit-crabs hurry sidewise on the tips of their claws, watching us with their baleful eyes and suddenly sink into their holes. Soon, everything brought for the purpose, is filled with shells, coral, Sponges, Echinoderms, Hydroids and Algæ. Then we begin to throw out poor specimens and substitute better and finally send our collections to the boat and turn our attention to the singular maritime plants, which, farther back from the shore are found in considerable variety. They are rigid, succulent, and generally devoid of the ordinary elements of beauty. Still farther from the shore the dreary landscape is brightened by patches of a remarkable grass, a long-awned variety of the *Muhlenbergia capillaris*. Its panicles are of silky softness and of a purplish crimson color. Growing as it does in dense clumps, when seen at a distance it has the appearance of crimson Phloxes. Nearest to the ocean, growing on the dunes, is found another and very different grass, the *Uniola paniculata*, commonly called sea-oats, and much used for ornamental purposes. It is a tough, leathery grass, growing in large clumps, so deeply rooted that it is little affected either by wind or waves. Its heads are borne in graceful panicles on stems from three to five feet high. In almost equally exposed locations is found a very singular Composite, the *Iva imbricata*. The influence of sea-water upon this plant, in producing an extraordinary distension of the cells and thickening of the involucres and leaves is very marked, as much so as in the common maritime *Chenopodiaceæ*, which are here well represented. The *Sesuvium Portulacastrum* grows in less exposed situations in great abundance, likewise the little *Vilfa Virginica*. On the sandy bluffs facing the sea, is found a variety of plants of quite a different character. The *Croton maritimum*

Phyllanthus Carolinianus, *Euphorbia polygonifolia*, *Ipomea Pes-capræ*, and *Batatas littoralis*. The last is in the same genus with the sweet potato which it closely resembles in flower and mode of growth. The leaves are thick but rather small, and probably present as great variety of form as any known plant. The daylight fails us ere we finish our search, the moon has risen, and the light-house fires begin to shine through the darkness. A parting stroll along the shore and we will bid it farewell. The sandy waste gleams white in the moonlight with a cold wintry aspect. Listening to the voices which arise from the dark abyss of waters, we hear tales of centuries past, when quaintly built ships from Spain and France sought these shores and upon them landed mailed warriors and adventurous cavaliers. For more than three centuries the armies of foreign nations fought for possession of the "flowery land," while the title of each was disputed by a warlike race of Indians. But they have all passed away, and of all scarcely a relic remains. This bloody epoch in the history of Florida is ended and this favored region, where so much of human life and energy has been wasted, has at last become, as designed by nature, an asylum for suffering humanity. Thousands do now resort to this land of perpetual verdure, seeking, not like De Leon, for a fountain of immortal youth but for renewed health and prolonged life.

ALTERNANTHERA LANUGINOSA IN KANSAS.—Among some collections made by Mr. I. C. Martindale and myself in Central Kansas last summer, I find *Alternanthera lanuginosa* of Torrey in the Mexican Boundary Survey. I am not quite sure of the location, but it was between Fort Harker and Fort Hayes. I have seen this enumerated in no list of Kansas Plants, and I suppose it has not been found anywhere near so far north before.—THOMAS MEEHAN, *Germantown, Pa.*

BENTHAM ON NOMENCLATURE.—In the American Journal of Science and Arts for April, Dr. Gray gives a review of Bentham's "Notes on *Euphorbiaceæ*," in which some remarks on nomenclature are made. They are so timely and interesting that we cannot refrain from publishing them.

The general laws of nomenclature of our day, and the principles on which they rest, are laid down in the code which was reported by Alphonse DeCandolle to the Paris International Convention, in the year 1867, and being approved, was published with a commentary in the autumn of that year, and in an English translation early in the ollowing year. The laws, without the commentary, were printed in

this Journal for July, 1868. The ten years succeeding have tested, somewhat thoroughly, the questions (nearly all of minor moment) upon which differing usages prevailed; and though one or two points are still mooted, the great majority of phænogamous botanists are coming to be of one mind and practice. But, as Mr. Bentham remarks: "The result has not been quite effectual in checking the ever-increasing spread of confusion in synonymy. Besides the young liberal-minded botanists who scorn to submit to any rule but their own, there are others who differ materially in their interpretation of some of the laws, or who do not perceive that in following too strictly their letter instead of their spirit, they are only adding needlessly to the general disorder. In the application as well as the interpretation of these rules they do not sufficiently bear in mind two general principles: first, that the object of the Linnæan nomenclature is the ready identification of species, genera, or other groups for study or reference, not the glorification of botanists; and secondly, that changing an established name is very different from giving a new name to a new plant."

It is to the latter point that this most experienced and even-minded botanist addresses himself. "The rule that long-established custom amounts to prescription, and may justify the maintenance of names which form exceptions to those laws which should be strictly adhered to in naming new plants, is unfortunately now frequently ignored. The law of priority is an excellent one; and when a genus or species has been well defined by an early botanist in a generally accessible work, but has subsequently been neglected, and the plant became known under other names, it is well that the original one should be restored. On the other hand it creates nothing but confusion to suppress a generic name, well characterized and universally adopted by long custom, in favor of a long-forgotten one, vaguely designated in an obscure work, out of the reach of the great majority of botanists. The greater number of Necker's genera have been so imperfectly characterized, with so absurd a terminology, that they are quite indeterminable; and his names deserve to be absolutely ignored, except in the very few cases where Jussieu or other early French botanists have succeeded in identifying them, and corrected their characters; but even then it is doubtful whether these names should not bear the date of the correction, rather than of the original work. Adanson's "Familles," with all the inconveniences of its form and absurd orthography, is much more scientific, and many of his genera are well defined, and have therefore been properly adopted."

Let us here interject a practical application. There is an old and well established genus *Smilacina*, of Desfontaines. There is a much older genus *Tovaria*, of Ruiz and Pavon, founded in 1794, ever since accepted, and without a synonym. Recently Mr. Baker of Kew, finding that Necker has a *Tovaria*, published in 1790, and therefore four years earlier than that of Ruiz and Pavon, takes up this name in place of *Smilacina*, and leaves a new name to be made for the long-established homonymous genus. It will be said that the rule of priority demands the sacrifice, and that the identification of Necker's genus is sure, because the three Linnæan species of *Convallaria* which properly constitute Desfontaines' *Smilacina* are referred to it by name; and that, though it be a case of *summum jus summa injuria*, the injurious consequence is a necessity. But Mr. Bentham's characterization of Necker's work applies even to this instance. Twice over Necker's *Tovaria* is described as having a perianth of five sepals, and the berry is said to be one-celled. Desfontaines' *Smilacina*, on the other hand, is correctly characterized. Moreover, if we do not include this among those names of Necker which, Mr. Bentham says, "deserve to be absolutely ignored," we may yet find that the law of priority has another claim on it. In 1763, a much better botanist than Necker, viz: Adanson, founded a genus *Tovara* (essentially the same name as *Tovaria*) on *Polygonum Virginianum*, L., which is not unlikely to be taken up as a genus; and the name would supersede Necker's by the same rule that Necker's supersedes Desfontaines' *Smilacina*. All things considered, then, this is a case for the application of the homely but useful rule *Quieta non movere;* and much of Mr. Bentham's pertinent advice may be condensed into this maxim. But there remain nice questions to settle with regard to the names and extent of the liliaceous genus.

"The representing the Greek aspirate by an *h* was generally neglected by early botanists; but now, ever since DeCandolle altered *Elichrysum* into *Helichrysum*, modern purists have insisted upon inserting the *h* in all cases; and this has been so far acquiesced in that it is difficult now to object to it, though it has the effect of removing so many generic names to a distant part of all indexes, alphabetical catalogues, etc. Admitting the propriety of adding the aspirate in new names, I had long declined to alter old names on this account; now, however, I find myself compelled to follow the current," which is, on the whole, regretable, as Alph. DeCandolle would hold out with him. See the latter's comment on his Article 66, in which the remark is dropped that, "we do not see why we should be more

vigorous than the Greeks themselves." Oddly enough, these same writers who must supply the aspirate to the *e* omit it from the *r*, and write *rachis* and *raphe*, instead of *rhachis* and *rhaphe*,—which is exasperating to lovers of uniformity.

Some New Musci, by C. F. Austin.—Neckera (Orthostichella) Ludoviciæ, C. M.—Muller's diagnosis of this species was founded on depauperate sterile specimens. It was found in fine condition in East Florida two years ago, by Capt. J. Donnell Smith, where it appears to be abundant. It is *robust* and quite different in appearance from *N. cymbifolium*, the stems being longer and usually furnished with numerous short branches. Leaves fulvous green, abruptly acuminate, papillose; cells linear, flexuose. Perichætial leaves with much elongated, abrupt hair-like eroded points. Some of the paraphyses leaf-like. Capsule elliptico-ovate, erect, tapering at the base, narrowed at the apex, solid, smooth, on a stout minutely roughened pedicel about 6 lines long; annulus 0; operculum convex or very shortly rostellate; peristomal teeth short and imperfect, linear, hyaline, subpapillose, incurved; calyptra with erect hairs.—*N. cymbifolium* is also abundant in East Florida, but has not yet been found in fruit.

Hypnum (Rhynchostegium?) Caloosiense, n. sp.—Antoicum, prostratum; caule intricato 2–3 uncias longo sat copiose subpinnatim ramoso paraphyllato, foliis sub-complanatis late suboblique ovatis subacuminatis, margine integerrima apicem versus obsoleteve serrulata plana vel inferiori versus basin late incurva, costa gemella pro more distincta longiuscula haud raro ad medium producta, cellulis perlaxis rhomboideo-fusiformibus rectis; paraphyliis conspicuis longe subulatis subfasciculatis; capsula late ovali in pedicello lævi subunciali pendula siccitate sub ore lato valde constricta basi valde obtusa: flores cauligeni parvi; bracteis acuminatis, acumine recurvo; paraphysibus paucis brevibus.

Low hummocks, along the Caloosahatchie River, Florida, March, 1878. *J. D. S.* and *C. F. A.*

In some respects like both *H. deplanatum*, Schimp. and *H. micans*, Swartz; but it is readily distinguished from the former by its antoicous inflorescene, shorter pointed entire leaves, and much longer entire paraphyllia; from the latter by its more obsoletely serrated leaves, and by the presence of paraphyllia on the stem; and from both by its darker green color, subpinnately and more copiously branched stems, much more loosely areolated leaves with the lower

margin often broadly inflexed, longer costa with the divisions more divergent above and less united at the base, and by the pendulous capsule. (Capsules too old; operculum, etc., not seen.)

H. deplanatum has minute ovate serrate either paraphyllia or paraphyllia like bracts on the stem, above the bases of the leaves. They are arranged in a bud-like ring, and are possibly bracts belonging to incipient branches.

HYPNUM (BRACHYTHECIUM) DONNELLII, n.sp.—Autoicum, amœne læte vel subaureo-viride, nitens; caule brevi depresso-cæspitoso vel arcte repente flexuoso subsimplici; foliis caulinis ovato-lanceolatis tenui acuminatis integerrimis (vel raro apice remote serrulatis) lenissime falcatis erectiusculis laxe imbricatis convexiusculis lævibus semicostatis, costa a lata basi tenui, cellulis pro genere permagnis superioribus lineari-fusiformibus rectis acutissimis, basilaribus permultis latioribus quadratis; capsula in pedicello lævi semiunciali tenuissimo minima ovali subhorizontali, operculo depresso-conico, peristomio interno breviusculo processibus subintegris ciliolis imperfectis, annulo—? calyptra nuda: foliis perichætialibus minoribus subconformibus ecostatis haud piliferis; organis genitalium brevissimis paraphysibus nullis.

On rotten wood, roots of trees and shells, on the shell mounds of Charlotte Harbor (Pine Island), Florida, March, 1878. *J. D. S.* and *C. F. A.*

This fine species is readily distinguished by its estriate entire leaves, short smooth pedicel, minute subhorizontal capsule, imperfect inner peristome, etc. Costa of leaf broad at the base, gradually becoming obsolete about midway to the apex. The fusiform cells of the upper part of the leaf pass abruptly into the numerous quadrate ones of the base; the dividing line between them passing very obliquely upward from the costa to the margin of the leaf,—more so than in the *H. acuminatum*, less so than in *H. subcapillatum*. Closely related to *H. acuminatum*, BEAUV.; but that is larger, with leaves bisulcate at the base, serrulate, the quadrate basal cells smaller and not passing so far up the margin, pedicel longer and stouter, capsule larger, erect, etc.

Brachythecum biventrosum, C. M. (*B. splendens*, AUST.) was found in great abundance on cypress stumps, limestone rocks, etc., in the Gulf Hummock, near Rosedale; the fruit (in March) was too old. Fine specimens of this species were confounded with *Hypnum acuminatum*, var. *rupincola* in Sulliv. and Lesqx. Exsic. Ed. 2, n. 492. It is rather

a robust species and appears to have been originally described by Muller from a depauperate form. The pedicel is obsoletely scabrous.

NOTES FROM MICHIGAN.—The underground stems of *Poa pratensis* do often penetrate and sometimes grow entirely through the tubers of potatoes. I saw a number of such cases last year. The thing is so common I never considered it worth recording. As Prof. Beal suggests, quick-grass may, in some instances, have been spread by this means.

Quercus bicolor, common on the banks of Maple and Grand Rivers, often produces abortive acorns in the axils of the cup scales, as has been recorded of *Q. prinoides*, Willd. It would be interesting to know if all the Chestnut Oaks do the same.—ERWIN F. SMITH.

CORRECTION.—In connection with the note on *Panicum litorale*, Vasey, in the last number of the GAZETTE, it should have been stated that the note from Gen. Munro was sent by Dr. Vasey for publication.

RECENT PUBLICATIONS.—*Catalogue of the "Davenport Herbarium" of North American Ferns*, by Geo. E. Davenport.—This Catalogue has just made its appearance and is certainly well done. The Davenport Herbarium contains specimens of every authentic species of Ferns in North America north of Mexico, so that a catalogue of it is nothing else than a complete catalogue of the Ferns of North America. The type is large and clear and the names stand out well on the page, making as complete and convenient a check list as a botanist could well desire. The catalogue contains 32 genera, 142 species, and 16 varieties Mr. Davenport is sparing in his use of varieties, very wisely deeming it not necessary to admit to such rank every slight deviation. The geographical distribution is based upon Mr. John H. Redfield's paper upon that subject in the Torrey Club Bulletin for Jan., 1875. Six geographical divisions are thus recognized, the names of which are sufficiently clear without definition, viz: Cosmopolitan, Boreal, Appalachian, Pacific, New Mexican, and Tropical. Prof. D. C. Eaton is followed in nomenclature. Mr. Davenport desires to add to the herbarium the remaining vascular cryptogams of the United States, and solicits specimens for that purpose. The Catalogue is well worth the patronage of all botanists, and published as it is at the author's expense, it is but simple justice for all to help bear the expense of that which is to benefit all. We hope therefore that botanists will send promptly to Mr. Davenport for copies, which can be had for 50 cents, by addressing him at Medford, Mass.

Proceedings of the Acad. Nat. Sci. of Philadelphia. Part III, Sept.,

Oct., Nov. and Dec., 1878.—The botanical contents are "On the Black Mildew of Walls." by Dr. Jos. Leidy, "Irritable or Sensitive Stamens," "Calluna vulgaris," "Dimorphism in Mitchella repens," by Thos. Meehan, and "Aspidium aculeatum in Pennsylvania," by Mr. Crozer Griffith.

Transactions of the Kansas Academy of Science, 1877 and 1878.—This makes a very neat pamphlet of 94 pages and is filled with interesting notes in almost every department of science. The botanical section is occupied chiefly in listing the plants of Kansas.

American Journal of Science and Arts, April.—Besides the article quoted from above, Dr. Gray has a notice of a paper by Strasburger on "*Polyembryony, true and false, and its relation to Parthenogenesis.*" According to Strasburger's investigations the embryo-sac of angiosperms very seldom produces more than one embryonal vesicle which is fecundated. The fact that many seeds contain more than one embryo is explained by the statement that they are adventitious, formed outside of the embryo-sac and enter it by pushing the walls before them or by piercing them. Thus situated they can hardly be distinguished from the embryo that has resulted from fecundation. This then explains the well known cases of *parthenogenesis.*

American Naturalist, April.—Mr. E. J. Hill has a note on the "Num ber of Stamens in *Brasenia peltata.*" From a study of specimens from several localities he concludes that the typical number is six, the number ranging from 12 to 36.

Bulletin of Torrey Botanical Club, Jan. and Feb.—Francis Wolle has an article on Fresh Water Algæ, being a synopsis of discoveries and researches in 1878. An obituary notice is given of Robt. H. Brownne, who died Feb. 15, 1879, at the age of 69.

Fern Etchings. by John Williamson.—Mr. Williamson is preparing a work bearing the above title. It will contain etchings of all the Ferns that have been found in the Eastern and Middle States. The price will be $7.50 a copy, including mailing. Any one desiring to subscribe for the work can address the author at Louisville, Ky.

Monographiæ Phanerogamarum.—The work upon the Monograph of the *Araceæ*, by Dr. Engler, for Vol. 2 of the *Monographiæ Phanerogamarum*, is already advanced. It will form one volume, for the number of known species has very greatly increased. In a third volume will be given Monographs of the *Cucurbitaceæ* by M. Alf. Cogniaux, and the *Araliaceæ* by M. Marchall. Later will be given the immense work of Gen. Wm. Munro upon *Gramineæ*, in the meantime other small families being given.